

IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A medical device comprising:
 - a device body extending from a proximal end to a distal end;
 - at least one electrode coupled with the device body, where the at least one electrode is configured to transmit and receive electrical signals to and from tissue; and
 - a rheometric material electrically coupled with the at least one electrode, the rheometric material contracts and/or stiffens when electrical current is applied thereto.
2. (Withdrawn) The medical device as recited in claim 1, wherein the rheometric material comprises a coating of electroactive polymer having a thickness of about 180 micron.
3. (Original) The medical device as recited in claim 1, wherein the rheometric material comprises a strip of material wound around a longitudinal axis of the device body.
4. (Original) The medical device as recited in claim 1, wherein the rheometric material comprises a layer of material on an outer surface of the at least one electrode.
5. (Original) The medical device as recited in claim 1, wherein the device body is defined by a first surface and a second surface, and the at least one electrode is disposed on the first surface of the device body.
6. (Original) The medical device as recited in claim 5, wherein the first surface is opposite the second surface, and at least one electrode is disposed on the second surface of the device body.

7. (Original) The medical device as recited in claim 1, wherein the device body comprises an elongate lead body configured to be coupled with a pulse generator.

8. (Original) The medical device as recited in claim 1, wherein the rheometric material comprises an electroactive polymer.

9. (Previously Presented) A medical device comprising:

an elongate device body extending from a proximal end to a distal end;

at least one electrode coupled with the device body, where the at least one electrode is configured to transmit and receive electrical signals to and from tissue;

at least one assembly coupled with the device body, where the at least one assembly is configured to stiffen the device body; and

the at least one assembly including a rheometric material, the rheometric material contracts and/or stiffens when electrical current is applied thereto.

10. (Original) The medical device as recited in claim 9, further comprising a control system which selectively applies current to the rheometric material, and a means for providing feedback to the control system.

11. (Withdrawn) The medical device as recited in claim 9, further comprising a means for transferring fluid along the elongate device body.

12. (Original) The medical device as recited in claim 9, wherein the device body is defined by a first outer surface and a second outer surface, and the at least one assembly is disposed on the first outer surface of the device body.

13. (Original) The medical device as recited in claim 12, wherein the first outer surface is opposite the second outer surface.

14. (Original) The medical device as recited in claim 9, wherein a plurality of assemblies are disposed on a first outer surface of the device body.

15. (Withdrawn) The medical device as recited in claim 9, wherein the device body includes a first outer surface and a second outer surface, and a plurality of assemblies are disposed on the first outer surface, and a plurality of assemblies are disposed on the second outer surface.

16. (Original) The medical device as recited in claim 9, wherein the at least one assembly is disposed adjacent to the distal end of the device body.

17. (Withdrawn) The medical device as recited in claim 9, wherein the assembly is disposed within at least one lumen of the device body along at least a portion of a length of the device body.

18. (Withdrawn) The medical device as recited in claim 17, wherein at least one assembly is disposed along the entire length of the device body.

19. (Withdrawn) The medical device as recited in claim 17, wherein the device body includes two or more lumens therein, and at least one lumen has a different cross-section than another lumen, and rheometric material is disposed within the two or more lumens.

20. (Withdrawn) The medical device as recited in claim 9, wherein the rheometric material comprises magnoactive material.

21. (Original) The medical device as recited in claim 9, wherein the rheometric material comprises electroactive material.

22. (Previously Presented) The medical device as recited in claim 9, wherein the device body has a preformed curved length portion.

23. (Previously Presented) A medical device comprising:

a device body extending from a proximal end to a distal end;
at least one electrode coupled with the device body, where the at least one electrode is configured to transmit and receive electrical signals to and from tissue;
at least one assembly coupled with the device body, the at least one assembly includes at least one winding of material wound around a longitudinal axis of the device body, where the at least one assembly is configured to stiffen the device body; and
the at least one assembly including a rheometric material, the rheometric material contracts and/or stiffens when current is applied thereto.

24. (Withdrawn) The medical device as recited in claim 23, wherein the rheometric material is an electroactive polymer coating of about 180 micron in thickness.

25. (Withdrawn) The medical device as recited in claim 23, wherein the winding of material extends from the proximal end to the distal end of the device body.

26. (Original) The medical device as recited in claim 23, further comprising a control system which selectively applies current to the electroactive material, and a means for providing feedback to the control system.

27. (Withdrawn) The medical device as recited in claim 23, wherein the winding of material is disposed within one or more lumens of the device body.

28. (Previously Presented) A medical device comprising:

an elongate device body extending from a proximal end to a distal end;

at least one electrode coupled with the device body, where the at least one electrode is configured to transmit and receive electrical signals to and from tissue;

at least one assembly coupled with the device body; and

means for electrically stiffening the at least one assembly and the device body, wherein electrical current is applied to the at least one assembly.

29. (Original) The medical device as recited in claim 28, wherein the at least one assembly includes an electroactive polymer associated therewith.

30. (Withdrawn) The medical device as recited in claim 28, wherein the at least one assembly includes magnetoactive material associated therewith.

31. (Withdrawn) The medical device as recited in claim 28, wherein the device body includes at least one lumen therein, and rheometric material is disposed within one or more lumens.

32. (Withdrawn) The medical device as recited in claim 31, wherein the device body further includes at least one lumen configured to receive a medical instrument or fluid therethrough.

33. (Original) The medical device as recited in claim 28, wherein the device body has a preformed curve.

34. (Withdrawn) A medical device comprising:

an elongate device body extending from a proximal end to a distal end;

the device body including at least one lumen therein, and rheometric material is disposed within one or more lumens, the rheometric material configured to stiffen the elongate device body upon application of electrical energy to the rheometric material.

35. (Withdrawn) The medical device as recited in claim 34, wherein the rheometric material includes an electroactive polymer.

36. (Withdrawn) The medical device as recited in claim 34, wherein the rheometric material includes magnoactive material.

37. (Withdrawn) The medical device as recited in claim 34, wherein the device body includes a passage extending from the proximal end to the distal end, the passage sized to receive at least one instrument therein, and a plurality of lumens are disposed about the passage.

38-57. (Cancelled)

58. (New) The medical device as recited in claim 14, wherein the plurality of assemblies includes at least a first assembly coupled with a first segment of the device body and a second assembly coupled with a second segment of the device body.

59. (New) A medical device comprising:

an elongate device body extending from a proximal end to a distal end;

at least one electrode coupled with the device body, where the at least one electrode is configured to transmit and receive electrical signals to and from tissue;

a first assembly coupled with a first segment of the device body, where the first assembly is configured to stiffen the first segment of the device body;

a second assembly coupled with a second segment of the device body, where the second assembly is configured to stiffen the second segment of the device body; and

the first assembly and the second assembly include a rheometric material, and the rheometric material of at least one of the first assembly and the second assembly contracts and/or stiffens when electrical current is applied thereto.

60. (New) The medical device of claim 59, further comprising a control system which selectively applies current to at least one of the first assembly and the second assembly, and a means for providing feedback to the control system.

61. (New) The medical device of claim 59, wherein at least one of the first segment and the second segment is stiff when electrical current is applied to the rheometric material.

62. (New) The medical device of claim 61, wherein one of the first segment and the second segment is stiff when electrical current is applied to the rheometric material, and the other of the first segment and the second segment is relaxed.

63. (New) The medical device of claim 59, wherein the rheometric material comprises a layer of material on an outer surface of the at least one electrode.

64. (New) The medical device of claim 59, wherein the first assembly and the second assembly are disposed on a first outer surface of the device body.

65. (New) A medical device comprising:

a device body extending from a proximal end to a distal end;

a first electrode coupled with the device body, where the at least one electrode is configured to transmit and receive electrical signals to and from tissue;

a second electrode coupled with the device body;

a rheometric material electrically coupled with the second electrode, the rheometric material contracts and/or stiffens when electrical current is applied thereto.

66. (New) The medical device of claim 65, wherein the first electrode and the second electrode are electrically coupled.

RESPONSE TO RESTRICTION REQUIREMENT

Serial Number: 09/970,146

Filing Date: October 2, 2001

Title: MEDICAL DEVICE HAVING RHEOMETRIC MATERIALS AND METHOD THEREFOR

Page 9
Dkt: 279.262US1

67. (New) The medical device of claim 65, wherein the rheometric material comprises a layer of material on an outer surface of at least the second electrode.

68. (New) The medical device of claim 65, wherein the device body comprises an elongate lead body configured to be coupled with a pulse generator.

69. (New) The medical device of claim 65, wherein the rheometric material includes an electroactive material.